Part IV Site Operating Plan Template AE Landfills

The Site Operating Plan (SOP) contains general instructions on how a landfill facility will conduct operations at the site, but is not intended to be a comprehensive operating manual. The SOP represents the design engineer's general instruction for site management and site operating personnel to operate the site in a manner consistent with the engineer's design and the commission's rules to protect human health and the environment and prevent nuisances.

The SOP is Part IV of the permit application and consists of the information required by Title 30, Texas Administrative Code, Chapter 330, Subchapter D: Operational Standards for Solid Waste Land Disposal Sites, 30 TAC §330.121–§330.179 (rules are available on the Internet at http://info.sos.state.tx.us/pls/pub/readtac§ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=330). At a minimum, the SOP must include provisions for site management and site operating personnel to meet the general and site-specific requirements of these rules.

Municipal Solid Waste (MSW) facilities may use this template to complete Part IV Site Operating Plan of their MSW permit application. Where applicable, facilities will provide detailed information to complete this document. Notes in italics indicate where detailed information may be needed. Additional pages may be attached and will include associated section headings.

Facility Name:	
TCEQ MSW Permit Number:	
Facility Address:	
RN Number:	
CN Number:	
Prepared by:	Phone(s):
Date:	

Note: The heading of each section in this document refers to the applicable rule.

§330.125 Recordkeeping Requirements

A copy of the permit, the approved Site Development Plan, the Site Operating Plan, the Final Closure
Plan, the Post-Closure Maintenance Plan, the Landfill Gas Management Plan, and any other required
plan or other related document will be maintained at
(the municipal solid waste facility name). If an alternate
location is proposed to house the Site Operating Record, incorporate your request here. These plan
and documents are part of the Site Operating Record.

The following records will be kept, maintained and filed as part of a facilities' Site Operating Record. Log books and schedules may be used.

- Access Control Inspection and Maintenance
- Daily Litter Pickup
- Windblown Waste and Litter Control Operations
- Management and Disposal of Large Items
- Dust Nuisance Control Efforts
- Access Roadway Regrading
- Salvaged Material Storage Nuisance Control Efforts
- Special Waste Contingency Plan Compliance, if applicable
- Regulated Asbestos Containing Materials (RACM) Contingency Plan Compliance, if applicable
- Class 1 Industrial Waste Contingency Plan, if applicable
- Access Control Breach and Repair Notices, if applicable
- Fire Occurrence Notices, if applicable
- Documentation of Compliance with Approved Odor Management Plan
- Ponding Prevention Plan Compliance Documentation
- Special Waste Operational Plan Compliance Documentation

In addition to the plans and documents listed above, the information listed in Table 1 will be recorded and retained in the Site Operating Record. This information will be placed in the Site Operating Record within seven working days of completion or upon receipt of analytical data, as appropriate.

The Site Operating Record will be maintained in an organized format that allows the information to be easily located and retrieved. All information contained in the Site Operating Record will be furnished upon request to the TCEQ executive director and will be made available for inspection by the executive director.

All information contained within the Site Operating Record and the different required plans will be retained for the active life of the facility including the post-closure care period.

Table 1. Site Operating Record.

	Records To Be Maintained	Rule Citation
1.	Inspection records, training procedures, and notification procedures relating to excluding the receipt of prohibited waste.	§330.125(b)(2)
2.	All results from gas monitoring and any remediation plans relating to explosive and other gases (if required).	§330.125(b)(3)
3.	Not applicable.	§330.125(b)(4)
4.	Not applicable.	§330.125(b)(5)
5.	Closure and post-closure care plans and any monitoring, testing, or analytical data relating to post-closure requirements.	§330.125(b)(6)
6.	Any and all cost estimates and financial assurance documentation relating to financial assurance for closure and post-closure.	§330.125(b)(7)
7.	Any and all information demonstrating continued compliance with the small community exemption criteria.	§330.125(b)(8)
8.	Copies of all correspondence and responses relating to the operation of the facility, modifications to the permit, approvals, and other matters pertaining to technical assistance.	§330.125(b)(9)
9.	Any and all documents, manifests, trip tickets, etc., involving special waste.	§330.125(b)(10)
10.	For any spray-applied alternative daily cover (ADC) material, records of the application rate and total amount ADC applied to the working face on those days in which ADC is applied.	§330.125(b)(11)
11.	Any other document(s) as specified by the approved permit or by the executive director.	§330.125(b)(12)
12.	Alternative schedules and notification requirements if applicable.	§330.125(g)
13.	Records to document the annual waste acceptance rate, quarterly solid waste summary reports, and the annual solid waste summary reports required by 30 TAC §330.675. (If annual waste acceptance rate exceeds 20 tons per day and the increase is not due to a temporary occurrence, the owner or operator will lose AE status and will file an application to amend the permit application. Refer to 30 TAC §330.125(h) for more information.)	§330.125(h)
14.	Load inspection records.	§330.127(5)(B)
15.	Fire occurrence notices.	§330.129
16.	Inspection records and training procedures relating to fire prevention and site safety.	§330.129
17.	Access control breach and repair notices.	§330.131
18.	All site inspection and maintenance documentation.	§330.131
19.	Record(s) of each unauthorized material removal event.	§330.133(b)
20.	Record of alternative operating hours if applicable.	§330.135(b)
21.	Water, crude oil and/or natural gas well location and plugging reports if applicable.	§330.161(a)-(c)
22.	Cover inspection records.	§330.165(h)
23.	Current site plan of RACM disposal area.	§330.171(c)(3)(B)
24.	RACM acceptance records including the location, depth and volume of each load.	§330.171(c)(3)(B)
25.	RACM contingency plan compliance documentation.	§330.171(c)(3)(H)

§330.127 Site Operating Plan

The Site Operating Plan will be retained during the active life of the site and throughout the post-closure care maintenance period.

§330.127(1) Landfill Personnel

Table 2 summarizes personnel types and descriptions. *Please add/edit any information as appropriate. Attach any separate page(s), including the applicable section heading.*

Table 2. Personnel Types and Descriptions.

Person	Number	Qualifications	Roles
Lead Operator/Site Supervisor	1	Must hold and maintain Landfill Operator license Class A (for Type IAE) or Class B (for Type IVAE), as required by 30 TAC §30.213.	Responsible for: Managing work face and daily fill and cover placement operations; Landfill equipment maintenance and repair; Personnel safety during waste and cover constructions
Equipment Operator	1 or (If not 1, Indicate the number of equipment operators at the site).	6 months minimum experience in equipment operation or on the job training by supervisor and training by landfill manager in SOP requirements for daily cover and unauthorized waste	Grading and excavating, necessary equipment maintenance, waste leveling and compaction, application of daily cover, and general site road maintenance. Operators are also responsible for keeping the working face in the smallest area practical and screening for unauthorized waste.
Gate Attendant	1	Training by general manager in the SOP rules, record keeping requirements, and waste screening training course (e.g., I.I.E.D.)	Levies fees on landfill customers, operates the scale, keeps appropriate records, controls site access screens for unauthorized waste, and provides general customer direction and information.
Litter Control	1	Internal safety training and personal protective equipment training	Picks up windblown litter as directed.

§330.127(2) Equipment

Table 3 summarizes the equipment used at the facility. The equipment type, number, size and function are also included.

Table 3. Landfill Facility Equipment List.

Equipment Type	Minimum Number	Typical Size	Function
Dozer(s)	1	D3C, 933C or equivalent	Waste and soil spreading and compaction
Earth-mover(s)	1	10 to 20 cubic yards (cy)	Transportation of daily cover, fire fighting support
Compactor(s)	1	200 horsepower or greater 50,000 lbs or greater	Waste and soil spreading and compaction
Water Truck(s)	1	500 gallons	Dust control, fire fighting support
Diesel Tank	1	1,000 gallons	Equipment fuel
Temporary Litter Fencing	1	150 feet four feet high	Active face litter control
Street Sweeper	1	5 foot broom	Cleaning of paved on-site roads
Portable Litter Screens	2	10 feet by ten feet high	Active face litter control
Road Grader or Maintainer	1	Various sizes	Grading of access roads, soil spreading

Additional Information about Facility Equipment:

If the facility uses equipment that does not appear in Table 3, list the minimum equipment type, number, size and function accordingly. If the facility does not use any of the equipment listed above, please indicate as well. Please attach separate page(s), including applicable section heading.

Equipment Backup Provision:

The following statement may be used, if it applies to this site: In the event of equipment repairs or during equipment maintenance periods, the facility will obtain equipment from other facilities, contractors, or local rental companies to avoid interruption of waste services. If additional provisions are needed, please attach separate page(s), including the applicable section heading.

§330.127(3) Operational Requirements

Table 4 outlines the site inspection and maintenance list of the facility. The Item, Task, Frequency, Inspector and Inspection Documentation are also included.

If the facility's operation includes additional items not listed in Table 4, please attach separate page(s) including the applicable section heading. Also, if any of the items do not take place at the facility, please indicate as well.

Table 4. Site Inspection and Maintenance List – Operational Requirements.

Item	Task	Frequency	Inspector	Inspection Documentation
Fence/ Gates	Inspect perimeter fence and gates for damage. Make repairs if necessary.	Weekly	Landfill Manager or Designee	Document inspection in the Site Operating Record
Windblown Waste	Police working face area, wind fences, access roads, entrance areas, and perimeter fence for loose trash. Clean up as necessary.	Daily as specified in Section of Site Operating Plan.	Landfill Manager or Designee	Document inspection in the Site Operating Record
Waste Spilled on Route to the Site	Police the entrance areas and all roads at least 2 miles from the site entrances for loose trash. Clean up as necessary.	Daily as specified in Section of Site Operating Plan.	Landfill Manager or Designee	Document inspection in the Site Operating Record
Landfill Markers	Inspect all landfill markers for damage, color-coding, and general location. Correct or replace damaged markers within 15 days of discovery.	Monthly	Landfill Manager or Designee	Document inspection in the Site Operating Record
Site Access Road	Inspect site access road for damage from vehicle traffic, erosion, or excessive mud accumulation. Maintain as needed with crushed rock or stone. Grading equipment will be used at least once per week to control or remove mud accumulations on roads as well as minimize depressions, ruts, and potholes.	Daily – more often during wet weather or extended dry weather periods.	Landfill Manager or Designee	Document inspection and repairs in the Site Operating Record
Daily Cover	Inspect for proper placement, thickness, and compaction. Correct problems as needed. Verify that vectors are not an issue.	Daily at the active face and all daily cover areas will be inspected.	Landfill Manager or Designee	Document inspection in the Site Operating Record

Item	Task	Frequency	Inspector	Inspection Documentation
Inter- mediate Cover	Inspect for proper placement, thickness, erosion, and compaction and for presence of waste or other contamination. Correct problems as needed.	Weekly and within 72-hours of a rainfall event of 0.5 inches or more.	Landfill Manager or Designee	Document in the Site Operating Record
Final Cover	Inspect for proper placement, thickness, compaction, slope, settlement and erosion. Maintenance will be ongoing throughout post closure care period. Correct problems as needed.	Weekly and within 72-hours of a rainfall event of 0.5 inches or more.	Landfill Manager or Designee	Document in the Site Operating Record
Site Signs	Inspect all site signs for damage, general location, and accuracy of posted information.	Weekly	Landfill Manager or Designee	Document in the Site Operating Record
Ponded Water	Inspect site for unauthorized ponded water areas as described in Section of Site Operating Plan. Correct problems as needed.	Weekly and within 72-hours of a rainfall event of 0.5 inches or more.	Landfill Manager or Designee	Document in the Site Operating Record
Odor	Inspect the perimeter of the site to access the performance of site operations to control odor.	Daily	Landfill Manager or Designee	Document in the Site Operating Record
Perimeter Channels/ Ponds	Inspect perimeter channels and detention ponds to verify that they are functioning as designed (e.g., excess sediment removed, outlet structures intact, erosion control measures intact).	Weekly and within 72-hours of a rainfall event of 0.5 inches or more.	Landfill Manager or Designee	Document in the Site Operating Record
GCCS	If applicable, verify GCCS is operating and maintained in accordance with all applicable requirements.	Monthly	Environmental Manager or Designee	Document in the Site Operating Record

§330.127(4) Training Requirements

Personnel training records will be maintained in accordance with 30 TAC §335.586(d) and (e).

Personnel operator licenses issued in accordance with 30 TAC, Chapter 30, Subchapter F (relating to Municipal Solid Waste Facility Supervisors) will be maintained as required.

Table 5 lists the applicable training requirements per 30 TAC §335.586(a) and (c) by position.

Table 5. Job Positions, Descriptions, and Training Requirements.

Position	Job Description	Site Orientation	Site Operations	Endangered Species	Haz Waste I dentification	Safety (job specific)	Fire Prevention	Load Inspection	Prohibited Wastes	SPCC	Emergency Response	LF License	Equipment Operator License	Liter Control	Random Inspections	SWPPP
Manager	Responsible for all activities Ensure adequate staffing and Inspections	X	X	X	X	X	X	X	X	X	X	A, B, or C		X	X	X
Supervisor	Manager LF staff Waste Operations	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	В		Х	Х	X
Gate Attendant	Take receipts Visual inspection of loads Direct vehicles to unloading areas	X		X	X	X	X	X	X	X	X				X	
Equipment Operator	Compact waste Unauthorized waste Apply daily cover	X		Х	Х	Х							С			
Laborer	As assigned	Х		Х		Χ	Х				Х			Χ		

Note: More detailed job descriptions along with written descriptions of the type and amount of introductory and continued training provided to each employee will be maintained in the facility Site Operating Record.

Training Requirements:

The personnel training program will be directed by a person trained in waste management procedures, and will include instruction that teach facility personnel waste management procedures and contingency plan implementation relevant to the positions in which they are employed.

New employees will receive a comprehensive overview of all aspects of landfill operations, focusing on information that is necessary to protect the health and welfare of the new employee and enable them to perform their duties in accordance with this SOP and operational standards required by the permit and the TCEQ municipal solid waste regulations. Following initial training, new employee training will continue during periodic training sessions consisting of on-the-job training.

Training meetings will be scheduled and conducted for all employees at least once per month. If a regular monthly meeting is cancelled, it will be rescheduled or combined with the scheduled training the next month. Training sessions will be scheduled to allow site operations to be uninterrupted. Records of personnel attending each training session and the topics covered will be maintained at the site. Topics for training may vary, but will be conducted annually for the following:

- Safety
- Fire protection, prevention, and evacuation
- Fire extinguisher use
- Emergency response
- Litter control and windblown waste pick-up
- Hazardous waste and PCB waste detection and control (waste screening), if applicable
- Prohibited waste management
- Properties of methane gas and safety procedures for methane gas, if applicable
- Random inspection procedures

Facility personnel will take part in an annual review of their initial training in accordance with 30 TAC §335.586(c). A written description of the type and amount of introductory and continued training provided to each employee will be maintained in the facility Site Operating Record.

If other training is completed at the facility or the training above does not apply, please attach separate page(s) with the applicable section heading.

§330.127(5) Detection and Prevention of the disposal of Prohibited Wastes

Below is a description of facility operations in accordance to 30 TAC §330.127(5).

If your facility differs from the description below, provide detailed information about your facility on a separate page(s) and provide information how it meets requirements of 30 TAC §330.127(5).

The acceptance and disposal of the following prohibited wastes will not be allowed at this site:

- Regulated Hazardous Waste other than from Conditionally Exempt Small Quantity Generators (CESQG). Municipal hazardous waste from a CESQG may be accepted; provided the generator provides a certification that it generates no more than 220 pounds of hazardous waste per calendar month.
- Polychlorinated Biphenyls (PCBs) wastes, as defined under 40 Code of Federal Regulations (CFR), Part 761, will not be accepted for disposal or disposed.
- Lead acid storage batteries will not be intentionally or knowingly accepted for disposal.
- Do-it-Yourself (DIY) used motor vehicle oil will not be intentionally or knowingly accepted for disposal.
- Used-oil filters from internal combustion engines will not be intentionally or knowingly accepted for disposal.
- Whole used or scrap tires will not be accepted for disposal or disposed.
- Items containing chlorinated fluorocarbons (CFCs), such as refrigerators, freezers, and air conditioners, will only be accepted at the site if the generator or transporter provides written certification that the CFC has been evacuated from the unit and that it was not knowingly allowed to escape into the atmosphere. The site operator will verify that the refrigerant has been evacuated from the appliance or shipment of appliances previously. Such verification will include a signed statement from the person from whom the appliance or shipment of appliances is obtained that all refrigerant that had not leaked previously has been recovered from the appliance or shipment of appliances in accordance with 40 CFR §82.156 (g) or (h) as applicable. This statement will include the name and address of the person who recovered the refrigerant and the date the refrigerant was recovered or a contract that refrigerant will be removed prior to delivery. The facility will notify persons who may deliver such items of the requirement to verify evacuation of refrigerant by signage or letter.
- Liquid waste (any waste material that is determined to contain "free liquids" as deemed by EPA
 Method 9095 (Paint Filter Test), as described in "Test Methods for Evaluating Solid Wastes,
 Physical chemical Methods" (EPA Publication Number SW-846)) will not be disposed of unless it
 is:
 - Bulk or non-containerized liquid waste that is household waste other than septic waste; or
 - Containerized liquid waste in a container that:
 - Is a small container similar in size to that normally found in household waste;
 - Is a container designated to hold liquids for use other than storage; or
 - Contains a household waste.
- Regulated Asbestos Containing Materials will not be disposed.
- Industrial Waste will not be disposed.

Measures for Controlling Prohibited Wastes:

Procedures to detect and control the receipt of prohibited wastes include:

- 1. Informing facility customers of prohibited wastes by posting one or more signs at the facility entrance listing prohibited wastes.
- 2. Providing customers (regular and one-time or occasional) with a written list of prohibited wastes.
- 3. Informing all drivers of incoming waste hauling vehicles and operators of any transfer stations that have indicated they will deliver waste to the facility for disposal of prohibited wastes by:
 - Posting one or more signs at the facility entrance listing prohibited wastes.
 - Providing all vehicle drivers and transfer station operators with a written list of prohibited wastes.
- 4. Facility personnel training and activities:
 - Training for appropriate facility personnel responsible for inspecting or observing incoming loads to recognize regulated hazardous waste and PCB waste.
 - Random inspections of incoming loads in accordance with procedures described in this section.
 - Maintaining records of all inspections.
 - Notification of the executive director of any incident involving a regulated hazardous waste or a PCB waste at the landfill.
 - Remediation of any regulated hazardous waste or PCB waste discovered at the site in accordance with 30 TAC §335.349.

Facility personnel will check for indications of prohibited waste as detailed below.

An important aspect of controlling the receipt of prohibited waste at the landfill is by the control of access into the facility by unauthorized vehicles. This issue is addressed in 30 TAC §330.131 Access Control. Facility personnel will be trained to inspect vehicles and identify regulated hazardous waste, polychlorinated biphenyl (PCB) waste and other prohibited wastes. At a minimum, the gatehouse attendant and equipment operators at the working face will be trained in inspection procedures for prohibited waste. The personnel will be trained on an on-the-job basis by their supervisors. Records of employee training on prohibited waste control procedures will be maintained in the facility Site Operating Record. The personnel will be trained to look for the following indications of prohibited waste:

- Yellow hazardous waste or PCB labels
- DOT hazard placards or markings
- Liquids
- 55-gallon drums
- 85-gallon overpack drums
- Powders or dusts
- Odors or chemical fumes
- Bright or unusual colored wastes

- Sludges
- Include any other items, as applicable

If landfill personnel identify any of the above indications with an incoming load, then that load will be directed to an area out of the flow of traffic, and the personnel will further assess the load. If the load is determined to contain prohibited waste or if there is any possibility that it may be prohibited waste, the load will be rejected and directed back to the generator. All landfill gate/scale attendants will be diligent in looking for trucks bringing in waste loads from potential sources of prohibited waste such as industrial facilities, microelectronics manufacturers, electronic companies, metal plating industry, automotive and vehicle repair service companies, and dry cleaning establishments.

Random Inspections:

Incoming waste is controlled in three ways to preclude the inadvertent receipt of prohibited wastes. One level of control is to inform customers of the types of waste that are to be excluded. A second control is to inform all vehicle drivers and transfer station operators of the restrictions. Key personnel will be informed of the typical visible characteristics of these materials. A third control is provided by the Facility Manager, Gate Attendant, and Equipment Operators through random inspections.

Random inspections by the landfill site personnel will be made daily of no less than one percent (1%) of incoming loads or one vehicle per day will be randomly inspected. For a random inspection, the gate/scale attendant will select an incoming vehicle for inspection, notify the equipment operator, and direct the selected load to the area of the working face. Inspections based on internal profiling procedures will count towards the total of random inspections. Once the selected load arrives at the working face, the equipment operator will direct the vehicle to a separate location of the working face and out of the flow of normal landfill traffic. As the load is dumped, the equipment operator will visually inspect the contents.

Records of all inspections will be maintained as part of the Site Operating Record. The results of these inspections will be documented on the Load Inspection Report Form and Waste Inspection Screening Form, if applicable. The reports will include the date and time of inspection, the name and address of the hauling company and driver, the type of vehicle, the size and source of the load, contents of the load, indicators of prohibited waste, and results of the inspection.

If your facility's procedures differ from the description above, please provide detailed information to demonstrate that it meets the requirements listed in 30 TAC §330.127(5). Please attach separate page(s) with the applicable section heading.

§330.129 Fire Protection

Fire Protection Plan:

The following steps are taken regularly at the facility by designated personnel to prevent fires:

- Prohibiting open burning of waste is at all times at the landfill.
- Preventing burning waste from incoming waste loads from being dumped in the active area of the landfill. The Scale Attendant and equipment operators will be alert for signs of burning waste such as smoke, steam, or heat being released from incoming waste loads.
- Fuel spills will be contained and cleaned up immediately. Soil contaminated with spilled fuel will be excavated and, if authorized, disposed of at the working face. Contaminated soils may be excavated using a shovel for small areas or with heavy equipment as appropriate.
- Landfill equipment will not remain in the vicinity of exposed waste overnight.
- Equipment that is used at the working face will be routinely cleaned through the use of high pressure water or steam cleaners. The high pressure water or steam cleaning will remove

combustible waste and caked material that can cause equipment overheating and increase fire potential. If equipment is cleaned at the working face, the amount of water used to clean the will be minimized.

- Dead trees, brush, or vegetation adjacent to the landfill will be removed immediately, and grass and weeds mowed at least semi-annually so that forest, grass, or brush fires cannot spread to the landfill or off-site.
- Smoking is not permitted on the active areas of the landfill site or near the brush grinding operation.
- Soil cover and non-flammable alternate covers will be used on a daily basis.

Procedures in the Event of a Fire:

Landfill staff will take the following steps if a fire is discovered:

- Contact the Local Fire Department.
- Alert other facility personnel.
- Assess extent of fire, possibilities for the fire to spread, and alternatives for extinguishing the fire.
- If it appears that the fire can be safely fought with available fire fighting devices until arrival of the Local Fire Department, attempt to contain or extinguish the fire.
- Upon arrival of Local Fire Department personnel, direct them to the fire and provide assistance as appropriate.
- Do not attempt to fight the fire alone. Do not attempt to fight the fire without adequate personal protective equipment. Be familiar with the use and limitations of firefighting equipment available onsite.

Fire Fighting Methods:

Fire fighting methods for burning solid waste include smothering with soil, separating burning material from other waste, spraying with water if available from an on-site water truck or detention pond. Small fires might be controlled with hand-held extinguishers. If the fire is at an active disposal area, if possible, the burning waste will be isolated or pushed away immediately before the fire can spread, or firebreaks will be cut around the fire before it can spread. If moving the waste is not possible, or if it is unsafe, efforts will be made to cover the working face with earth immediately to smother the fire. The faster that soil can be placed over the fire, the more effective this method will be in controlling and extinguishing the fire. If a fire is in the working face, the burning area will be isolated and pushed away from the working face quickly, or firebreaks will be cut around the fire before it can spread. If this is not possible or this is unsafe, efforts to cover the working face with earth will be initiated immediately to smother the fire. The stockpiled daily earthen cover material may be used for firefighting purposes.

If a fire occurs on a vehicle or piece of equipment, the equipment operator will bring the vehicle or equipment to a safe stop. If safety of personnel will allow, the vehicle will be parked away from fuel supplies, uncovered solid wastes, and other vehicles. The engine will be shut off and the brake engaged to prevent movement of the vehicle or piece of equipment.

Earthen Material Coverage:

Please attach separate page(s) reflecting the earthen material coverage calculations. Below is an example. You may refer to 30 TAC §330.129 for additional information.

Landfill fires normally will be extinguished by smothering with cover material spread by a dozer or other suitable equipment. A minimum of _____ cubic yards of soil or enough soil to cover the working face with at least six inches of compacted soil will be stockpiled within _____ feet of the working face for this purpose.

Example:

44 cubic yards of soil required for a six-inch cover on a 2,000-square-foot working face (including a twenty percent contingency) is calculated as follows:

2,000 square feet working face x = 0.5-foot depth soil = 1,000 cubic feet soil

1,000 cubic feet / 27 cubic feet / cubic yard = 37 cubic yards

37 cubic yards soil x 1.2 (20% contingency) = 44 cubic yards soil needed in stockpile

A daily log will be maintained documenting the location of the stockpile, the distance of the stockpile from the working face, the volume of the stockpile, the use and replacement of soil for fire control, and demonstration that the amount of stockpiled soil is adequate to cover the largest working face in use on that day. The operator will, at all times, maintain sufficient equipment for moving the soil stockpile and placing a six-inch soil cover over the working face within one hour of detecting a fire at the working face.

Earthen Material Distance from Working Face:

Please provide information demonstrating adequate distance of earthen material to the working face, to allow for full coverage within one hour. Below is an example that you may adjust to suite your facility. You may refer to 30 TAC §330.127 for additional information.

Example:

A stockpile of earthen material adequately sized to cover the working face will be maintained at all times, close enough to the working face or active disposal area to cover the working face within one hour, as provided in the following demonstration. The source will be sized to cover the working face with a six-inch layer of earthen material.

The following calculations are presented to demonstrate the adequacy of earthen material stockpile that will be maintained within 1,500 feet of the working face. The typical size of the working face will be approximately 2,000 square feet. For covering this size of working face, the required stockpile will be 44 cubic yards (see example in preceding section, under Earthen Material Coverage). This earthen volume would be distributed across the working face by one of the earthmovers required on-site, such as a front-end loader or bulldozer (refer to the equipment list in the SOP). Additional equipment will be used if needed to smother the fire within one hour of being detected.

Volume of Soil Needed 44 cubic yards (cy)

Size of Haul Trucks 15 cy Number of Haul Trucks 1

Number of Loads to Transport Soil 3

Time to Load Truck 5 min

Average Truck Speed 968 feet/min (11 mph)

Distance of Stockpile from Working Face 1500 feet

Average Roundtrip Time (including unload) 3.5 mins Total Load and Transport Cycle Time 8.5 mins Time Required to Cover Working Face 26 mins

3 loads x 8.5 minutes/load 26 mins

Fire Equipment:

The site will be equipped with fire extinguishers of a type, size, location, and number as recommended by the local fire department. Each fire extinguisher will be fully charged and ready for use at all times. Each extinguisher will be inspected on an annual basis and recharged as necessary. A qualified service company will perform these inspections, and all extinguishers will display a current inspection tag. Inspection and recharging will be performed following each use. The gatehouse, all landfill equipment, and landfill vehicles will be equipped with fire extinguishers.

Fire Protection Training:

Training of on-site personnel in firefighting techniques, fire prevention, response, and the fire protection aspects of the SOP will be provided, by established professionals, on an annual basis. Personnel will be familiar with the use and limitations of firefighting equipment available onsite. Records of this training will be included in the Site Operating Record for the facility.

TCEQ Notification:

After any fire (related to waste management activities that cannot be extinguished within 10 minutes of discovery) occurs, the TCEQ regional office will be contacted. The notification to the regional office will include:

- Contact by telephone as soon as possible, but no later than four hours following fire discovery, and
- Provide a written description of the cause and extent of the fire and the resulting fire response within 14 days of fire detection.

Landfill fires frequently cause concern on the part of nearby landowners, who turn to the TCEQ's regional office for information. Because of this, the facility will provide to the appropriate TCEQ regional office as much information as possible regarding the fire and fire-fighting efforts, as soon as possible after the fire occurs.

The fire prevention and fire control procedures for the facility will be revisited following the occurrence of a significant fire to determine if modifications are warranted.

Please refer to rules in 30 TAC §§330.15(d) and 330.129 for information pertaining to the prohibition of open burning and fire protection plans.

§330.131 Access Control

Site Security:

Public access will be controlled to minimize unauthorized vehicular traffic, unauthorized and illegal dumping, and public exposure to hazards associated with landfills. Controlled access will be obtained by fences and gates.

Vehicle Access:

Public access roads to the landfill are paved, all-weather roads. Only vehicles authorized by the landfill manager, landfill construction vehicles, landfill personnel vehicles, and authorized haul vehicles have access beyond the scale house or facility entrance. Only authorized haul vehicles or vehicles authorized by the manager or designee are allowed access to the working face. Signage will provide direction to customers and the public to the public entrances of the landfill. Additional signage within the facility will provide direction to public unloading areas.

Vehicles transporting solid waste arriving at the waste disposal working face will be directed to an unloading area by on-site personnel or signage. Operations at the working face will be conducted in a manner that allows the prompt and efficient unloading of waste. The approach to the unloading area will be wide enough to safely unload at least two vehicles side-by-side.

Please attach a separate page with a description of the type, size, and performance specifications of fences if NOT already specified in Part III- Site Design of the facility's permit application. Also, please describe any natural barriers if used by the facility for access control. Natural barriers may include dense foliage, trees, rivers, and tributaries.

Provide any additional details or state how your facility varies from vehicle access information above. Also describe the facility's schedule of solid waste transportation vehicles, any maneuvering areas and loading areas, and the facility's procedures for loading and unloading waste loads.

The facility will comply with the schedule and notification requirements in Table 6 for any access breach.

Table 6. Schedule for notification and repair of perimeter access control breaches.

Requirement	Access Breach Permanently Repaired Within 8 Hours	Access Breach Not Permanently Repaired Within 8 Hours
Notify region office of breach and repair schedule	Not required	Within 24 hours of breach detection
Make temporary repairs	(not applicable)	Within 24 hours of breach detection
Make permanent repairs	Within 8 hours of breach detection	Within schedule indicated in initial breach report submitted to regional office
Notify regional office when permanent repair completed	Not required	Within schedule indicated in initial breach report submitted to regional office

§330.133 Unloading of Waste

The unloading of solid waste is to be confined to as small an area as practical. The maximum size of the unloading area will be ______ feet in length by _____ feet in depth (to be completed by the facility).

The unloading of waste in unauthorized areas is prohibited. Any waste deposited in an unauthorized area will be removed immediately and disposed of properly. A trained employee will be present at the entrance at all times during operating hours to monitor all incoming loads of waste, and will direct traffic to the appropriate unloading area. There will be one general-purpose waste unloading area. Trained personnel will also be on duty during operating hours at the working face to direct and monitor unloading of solid waste.

Gate attendants and equipment operators will monitor the incoming waste. These personnel will be familiar with the rules and regulations governing the various types of waste that can or cannot be accepted into the facility, including knowledge of 30 TAC §330.133. The personnel will also have a basic understanding of both industrial and hazardous waste and their transportation and disposal requirements. The facility is not required to accept any solid waste that may cause problems in maintaining full and continuous compliance with the permit.

Certain wastes are prohibited from disposal at this facility. Prohibited wastes are described in 'Detection and Prevention of the Disposal of Prohibited Wastes' section of this plan. The unloading of prohibited wastes at the facility will not be allowed. Necessary steps will be taken by the landfill

operator to ensure compliance. Landfill personnel have the authority and responsibility to reject unauthorized loads, have unauthorized material removed by the transporter, and/or assess appropriate surcharges, and have the unauthorized material removed by on-site personnel or otherwise properly managed by the facility. Any prohibited waste not discovered until after unloading will be placed back in the offending transporter's vehicle, if possible, or otherwise returned promptly to the transporter or generator of the waste. The driver may be advised where the waste may be disposed of legally and will be responsible for the proper disposal of this rejected waste.

In the event the unauthorized waste is not discovered until after the vehicle that delivered it is gone, the waste will be segregated and controlled as necessary. An effort will first be made to identify the entity that deposited the prohibited waste and have them return to the site and properly dispose of the waste. In the event that identification is not possible, the landfill manager/supervisor will notify the TCEQ and seek guidance on how to dispose of the waste as soon as practical. A record of unauthorized material removal will be maintained in the Site Operating Record.

Only those persons operating vehicles that comply with the following requirements will be authorized by the landfill M/S to dispose of waste at this site:

- All vehicles and equipment used for the collection and transportation of waste will be operated, and maintained to prevent loss of waste material and to limit health and safety hazards to landfill personnel and the public.
- Collection vehicles and equipment will be maintained in a sanitary condition to preclude odors and fly breeding.
- Collection vehicles not equipped with an enclosed transport body will use other devices such as nets or tarpaulins to preclude accidental spillage.

Landfill personnel will keep vigilant watch for compliance with operating requirements. Signs with directional arrows and/or portable traffic barricades will help to restrict traffic to designated disposal locations. Signs will be placed along the access route to the current disposal area. In addition, rules for waste disposal and prohibited waste will be prominently displayed on signs at the site entrance.

§330.135 Facility Operating Hours

The hours of waste operation are to be as follows:

____ a.m. to ____ p.m. on Saturday.

•	The waste acceptance hours during which the landfill site will be open to the public are from a.m. to p.m., Monday through Friday and from a.m. to p.m. on Saturday. These hours will be posted on a sign at the entrance to the landfill.
•	The site operating hours are from a.m. to p.m., Monday through Friday and from

Facility operating hours may be two hours before and two hours after their waste acceptance hours.

Daily cover will be applied as soon as possible, but not more than one hour after closure to the public on the working face.

In addition to the waste acceptance and operating hours, operation of additional facilities, such as composting, may occur twenty-four hours per day, seven days per week.

If the facility's hours vary from those listed above, please provide detailed information on a separate page with appropriate section heading. Please note any alternative or additional operating hours must be listed in the Site Operating Record.

§330.137 Site Sign

A conspicuous sign measuring a minimum four feet by four feet will be maintained at the public entrance to the site. The sign states, in letters at least three inches high, the following information:

	Type of MSW Facility:
•	Authorized by TCEQ Permit Number:
•	Hours of Operation:
•	Emergency 24-hour Contact Number:
•	Local Emergency Fire Department Number:

The sign will be visible and readable from the facility entrance. A sign prohibiting receipt of hazardous waste and closed drums and prohibiting smoking will be posted near the facility entrance or gatehouse. A sign will be prominently displayed at the facility entrance stating that all loads will be properly covered or otherwise secured.

§330.139 Control of Windblown Solid Waste and Litter

Windblown waste and litter will be controlled through several methods, including proper unloading, compaction, and cover procedures. The use of portable litter control fences, the orientation of the working face relative to the prevailing wind direction, the placement of screening berms, stockpiles and landscaping and adequate staffing also will provide control of windblown waste and litter. Personnel will police the landfill site, including fences, access roads, and the entrance gate, every operating day to pick up and return windblown waste and litter to the active working face and perform such other litter control measures, as necessary.

Daily cover will be placed on top of the waste lift as soon as it is practical for any portion of the lift that reaches recommended lift height. The working face will be covered daily.

If the facility differs from above, please provide additional detail on a separate page with appropriate section heading.

§330.141 Easements and Buffer Zones

No solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way that crosses the site. No solid waste disposal will occur within 25 feet of the center line of any utility line or pipeline easement, unless otherwise authorized by the executive director. All pipeline and utility easements are clearly marked with posts that extend at least six feet above ground level, spaced at intervals no greater than 300 feet. The buffer zones may vary around the perimeter of the site, but in no case will they be less than 50 feet. All buffer zones, as depicted in the site design, will be clearly marked as specified by TCEQ rules.

On a separate page, please provide information on each actual utility line or pipeline easement within the site permit boundaries. The types of easements and their locations and dimensions will be discussed. No solid waste unloading, storage, disposal, or processing operations will occur within any easement. All easements will be clearly marked as specified in 30 TAC §330.141.

If the facility differs from above, please provide additional detail on a separate page with appropriate section heading.

§330.143 Landfill Markers and Benchmark

Landfill markers clearly mark significant features as described in 30 TAC §330.143(b). The markers are steel or wooden posts (or other TCEQ-approved material) and extend at least 6 feet above the ground surface. The markers will be maintained unobscured by vegetation and will be placed in

sufficient numbers to clearly indicate the required boundaries. Markers that are removed or destroyed will be replaced within 15 days of their removal or destruction. Landfill markers will be inspected on a monthly basis and will be maintained and repaired on a scheduled basis. Markers are repainted, repaired, or replaced to maintain visibility within 15 days.

Guidelines for type, placement, and color coding of markers are provided in Table 7. The required landfill markers are:

Table 7. Landfill markers and color coding.

	Т		
Marker	Color		
Site Boundary	Black		
Buffer Zone	Yellow		
Easements	Green		
Grid System	White		
SL/ER	Red		
Floodplain	Blue		

If the facility differs from above, please provide additional detail on a separate page with appropriate section heading.

§330.145 Materials along the Route to the Site

(facility name) will take steps to encourage that vehicles hauling waste to the landfill
are enclosed or provided with a tarpaulin, net, or other means to effectively secure the load in order to
prevent the escape of any part of the load by blowing or spilling (facility name) will
take actions such as posting signs, reporting offenders to proper law enforcement officers, adding
surcharges, or similar measures. On days when the landfill is in operation, the operator will clean up
waste materials spilled along and within the right-of-way of public access roads serving the facility for
a distance of two miles in either direction from any entrances used for the delivery of waste to the
facility at least one time each day(facility name) will consult with the Texas
Department of Transportation or county and/or local governments with maintenance authority over
the roads, concerning cleanup of public access roads and rights-of-way.

If the facility differs from above, please provide additional detail on a separate page with appropriate section heading.

§330.147 Disposal of Large Items

Large, heavy, or bulky items that cannot be incorporated in the regular spreading, compaction, and covering operations at landfills will be recycled. A special area will be established to collect these items. This special collection area will be designated as a large-item salvage area. ______ (facility name) will remove the items from the site often enough to prevent these items from becoming a nuisance and to preclude the discharge of any pollutants from the area.

Items classified as large, heavy or bulky can include, but are not limited to, white goods (household appliances), air conditioner units, metal tanks, large metal pieces, and automobiles.

Refrigerators, freezers, air conditioners, and any other items containing chlorinated fluorocarbon (CFC) will be handled in accordance with 40 CFR §82.156(f), as amended.

If the facility differs from above, please provide additional detail on a separate page with appropriate section heading.

§330.149 Odor Management Plan

		mission rules concerning burning and air	
pollution control	(<i>facility name</i>) wil	ll ensure that any unit of the municipal solid was	te
facility does not violate	any applicable requirement of	of the approved state implementation plan	
developed under the Fe	ederal Clean Air Act, §110, as a	amended, and 30 TAC §330.15(d) of this title	
(relating to General Prowaste landfill facility.	ohibitions), which prohibits th	he open burning of waste at any municipal solid	
(facility	name) will ensure that the m	nunicipal solid waste facility does not violate any	
applicable air quality re	equirement in Attachment	of the Site Development Plan.	

Odor Management Plan:

Sources of Odor. Potential odor sources associated with a municipal solid waste landfill facility include the wastes being delivered to the landfill, the open working face, ponded water, and landfill gas. Many of the wastes received at a landfill are a source of odor upon receipt, such as sludges and dead animals. Other wastes have the potential for becoming sources as they biodegrade during the decomposition process. Ponded water and landfill gas could become sources of odor as well.

Odor Control. Methods used to control odors include waste management procedures, the placement of cover materials, the control of ponded water, and landfill gas control. These methods, described below, are also included in Part III of the facility's Site Development Plan, Attachment ____, Gas Management Plan as appropriate.

Wastes will be deposited at the working face, spread into layers that can be readily compacted, and covered with a minimum of six inches of soil or with an approved alternate daily cover material. Dead animals will be covered immediately upon placement into the working face with three feet of waste or two feet of soil. Waste that is identified as particularly odorous by the gate attendant or equipment operator will be buried immediately upon receipt in the working face with prompt compaction and covered with incoming waste and/or daily cover.

If the facility's processes differ from above or if additional detail can be provided, please elaborate on a separate page with appropriate section heading.

If the facility will use misters to control order, please note prior approval from the executive director must be obtained. The modification request may act as the authorization request, but please provide a description of how the mister system will be constructed and how it will be used. Also, please provide a material safety data sheet (MSDS) for the material to be misted. The MSDS will be forwarded to air emissions and toxicology groups at TCEQ for further consideration.

§330.151 Disease Vector Control

The need for control of vectors such as rodents, flies, and mosquitoes at landfills will be minimized through daily site operations, which include the application of daily, intermediate, and final cover. The facility will also minimize the extent of the working face to control vectors.

If necessary, a licensed professional will apply pesticides for control of vectors to ensure that proper chemicals are used and that they are properly applied.

Please specify the general methods and performance-based frequencies for disease vector control on a separate page with applicable section heading.

§330.153 Site Access Roads



Tracked mud and associated debris at the entrance to the facility and on the public roadway at the entrance to the facility and trash on public roadways will be removed at least once per day on days when mud and associated debris are being tracked onto the public roadway, to the extent that mud can be reasonably considered to be associated with landfill operations.

_____ (facility name) will keep records to demonstrate compliance with the requirement.

Dust from on-site and other access roadways will not become a nuisance to surrounding areas. A water source and necessary equipment or other means of dust control approved by the TCEQ executive director will be provided.

Litter and any other debris on-site and other access roadways will be picked up at least daily and taken to the disposal area.

Access roadways will be regraded to minimize depressions, ruts, and potholes.

For tracking of mud and trash onto public roadways, the paved entrance road and crushed-stone (or similar material) internal roads will provide mud control for the waste hauling vehicles prior to exiting the site and returning to public access roads. Street sweeper type equipment will be used to remove mud accumulations on roads.

For dust from on-site and other access roadways, the landfill haul roads and access roads will be maintained in a reasonable dust-free condition by periodic spraying from a water truck.

For maintenance of on-site and other access roadways, in addition to stockpiles of crushed stone, the operator may stockpile concrete rubble, masonry, or other similar material used in maintaining passable access roads. Grading equipment will be used as necessary to control or remove mud accumulations on roads.

Please provide a roadway maintenance schedule on a separate page with applicable section heading. Also, if additional details are needed or if the other aspects exist other than the information above, please provide additional information.

§330.155 Salvaging and Scavenging

Salvaging will not be allowed to interfere with prompt sanitary disposal of solid waste or to create public health nuisances. Salvaged materials will be considered as potential recyclable materials and will be stored in a designated collection area. The collection area will be identified in the site operating record. Salvaged items will be recycled often enough to prevent an excessive accumulation of the material at the site to prevent odor or other nuisance conditions from developing and to eliminate the risk of discharge of pollutants.

Pesticide, fungicide, rodenticide, and herbicide containers will not be salvaged unless they are salvaged through a state-supported recycling program. Salvaging of special waste will be prohibited. Salvaging of wastes will not occur where waste has been covered with daily cover.

Please provide any additional information with applicable section heading on a separate page.

§330.157 Endangered Species Protection

§330.159 Landfill Gas Control (if applicable)

If required, all landfill gases will be monitored in accordance with a landfill gas management plan in accordance with 30 TAC §330.63(g) of this title (relating to Attachments to the Site Development Plan). The required reports and other submittals will be included in the Site Operating Record of the facility and submitted to the executive director.

§330.161 Oil, Gas, and Water Wells

________(facility name) will identify any known abandoned crude oil, natural gas, other wells associated with mineral recovery, or water wells on the facility. Wells within the permitted facility may be authorized in accordance with 30 TAC §330.161. Please refer to the rule for authorization procedures. If no well exist within the permitted boundary, please state so in this paragraph of the SOP. If in the course of landfill construction a well is discovered, the TCEQ will be notified per 30 TAC §330.161.

§330.163 Compaction

Solid waste will be spread and compacted by repeated passages of compaction equipment such that each layer of solid waste is thoroughly compacted. Specify the methods for compaction in this paragraph of the SOP.

§330.165 Landfill Cover

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not con int <i>No</i>	t previously mixed with garbage, rubbish, or other solid waste at the end of each operating day to ntrol disease vectors, fires, odors, windblown litter or waste, and scavenging, unless a more frequent erval is required to control disease vectors, fires, odors, windblown litter or waste, and scavenging. If (facility name) operates on a 24-hour basis, the working face or active sposal area will be covered at least once every 24 hours.
but incoming app not por are the	termediate Cover
by Wa acc	ternative Material Daily Cover. Note: Alternative material daily cover (ADC) may be allowed a temporary authorization under 30 TAC §305.70(m) of this title (relating to Municipal Solid aste Permit and Registration Modifications) followed by a permit amendment or a modification in cordance with 30 TAC §305.70(k)(1) of this title. Use of ADC is limited to a 24-hour period after nich either waste or daily cover as defined in subsection (a) of this section will be placed.
1.	An ADC operating plan will be included in the request for temporary authorization or in the site development plan that includes the following:
	• A description and minimum thickness of the alternative material to be used.
	• Its effect on vectors, fires, odors, and windblown litter and waste.
	• The application and operational methods to be utilized at the site when using this alternative material.
	• Chemical analysis of the material and/or the Material Safety Data Sheet(s) for the alternative material.
	• Any other pertinent characteristic, feature, or other factors related to the use of this alternative material.
2.	A status report on the ADC will be submitted on a two-month basis to the executive director during the temporary authorization period describing the effectiveness of the alternative material, any problems that may have occurred, and corrective actions required as a result of such problems. If no unresolved problems have occurred within the temporary authorization period, status reports may no longer be required.
3.	ADC will not be allowed when the landfill is closed for a period greater than 24 hours, unless the executive director approves an alternative length of time.
Fi	nal Cover (facility name) will install final cover for the landfill in accordance with

Erosion of Cover. Erosion of final or intermediate cover will be repaired within five days of detection by restoring the cover material, grading, compacting, and seeding unless the commission's regional office approves otherwise, based on the extent of the damage requiring more time to repair or

the site closure plan and Subchapter K of 30 TAC Chapter 330 (relating to Closure and Post-Closure).

the repairs are delayed because of weather conditions. The periodic inspections and restorations are required during the entire operational life and for the post-closure maintenance period.

Cover Inspection Record. _______ (facility name) will keep a cover application record on site readily available for inspection by commission representatives and authorized agents or employees of local governments having jurisdiction. This record will specify the date cover (no

site readily available for inspection by commission representatives and authorized agents or employees of local governments having jurisdiction. This record will specify the date cover (no exposed waste) was accomplished, how it was accomplished, and the last area covered. This applies to daily, intermediate, and alternate daily cover. For final cover, this record will specify the area covered, the date cover was applied, and the thickness applied that date. Each entry will be certified by the signature of the on-site supervisor that the work was accomplished as stated in the record.

§330.167 Ponded Water

The ponding of water over waste on a landfill, regardless of its origin, will be prevented. Ponded water that occurs in the active portion of a landfill or on a closed landfill will be eliminated and the area in which the ponding occurred will be filled in and regraded within seven days of the occurrence.

In accordance with 30 TAC §330.207, please include a statement that the owner or operator of the MSW facility will not discharge contaminated water without specific written authorization from the TCEQ.

Note: All water coming into contact with waste or contaminated soils will be treated as contaminated water. All water coming in contact with waste, or contaminated soils will be treated as leachate. Contaminated water may not require the level of treatment that is required for leachate. Leachate is a subset of contaminated water.

§330.169 Waste in Enclosed Containers or Enclosed Vehicles Accepted at Type IV Landfills

Acceptance of waste in enclosed containers or enclosed vehicles at Type IV landfills will be in accordance with the requirements in 30 TAC §330.169(1) - (3). This section is not applicable for the _____ (facility name).

§330.171 Disposal of Special Wastes

The acceptance and/or disposal of a special waste as defined in 30 TAC §330.3 (relating to Definitions) which is not specifically identified in subsections (c) or (d) of 30 TAC §330.171, or in 30 TAC §330.173 (relating to Disposal of Industrial Wastes) will not be accepted at _____ (facility name) without prior written approval from the executive director.

Note: Requests for approval to accept special wastes will be submitted by the generator to the executive director or to a facility with an approved plan and will include at least the following information:

- A complete description of the chemical and physical characteristics of each waste, a statement as to whether or not each waste is a Class 1 industrial waste as defined in 30 TAC §330.3 of this title, and the quantity and rate at which each waste is produced and/or the expected frequency of disposal.
- An operational plan containing the proposed procedures for handling each waste and listing required protective equipment for operating personnel and on-site emergency equipment.
- A contingency plan outlining responsibility for containment and cleanup of any accidental spills occurring during the delivery and/or disposal operation.

The executive director may authorize the receipt of special waste with a written concurrence from the owner or operator; however, the facility operator is not required to accept the waste. The executive director may revoke an authorization to accept special waste if the owner or operator does